

## **REMARKS**

Claims 1-18 and 24-28, as amended, are pending in this application. In this Response, Applicant has amended certain claims. In light of the Office Action, Applicant believes these amendments serve a useful clarification purpose, independent of patentability. Accordingly, Applicant respectfully submits that the claim amendments do not limit the range of any permissible equivalents.

In particular, independent claims 1, 12, and 24 have been amended to further clarify the embodiments of the present invention. As now new matter has been added by the amendments herein, Applicants respectfully request entry of these amendments at this time.

## **THE REJECTIONS UNDER 35 U.S.C. § 103**

Claims 1-18 and 24-28 were rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 5,342,054 to Chang *et al.* (“Chang”), U.S. Patent No. 5,372,365 to McTeigue *et al.* (“McTeigue”), U.S. Patent No. 4,451,043 to Ogawa *et al.* (“Ogawa”), U.S. Patent No. 5,447,314 to Yamazaki *et al.* (“Yamazaki”), and further in view of U.S. Patent No. 6,983,637 to Nesbit *et al.* (“Nesbit”) for the reasons set forth on pages 2-8 of the Office Action.

As set forth in a previous response, the cited combination of Chang, McTeigue, and Nesbit does not render the present invention obvious. In particular, Chang is completely silent as to an ultrasonic trigger, McTeigue does not teach or suggest ultrasonic triggers or even triggers in general, and Nesbit’s system does not include a trigger that is connected to a computing device that controls image acquisition. February 27, 2008 Response to Final Office Action at Pages 6-8.

In an attempt to cure these deficiencies, the Examiner cited Ogawa and Yamazaki. Ogawa, however, discloses a golf trainer that includes a sensor case that is connected to an golf mat. Ogawa at Col. 2, lines 20-38. The golf mat includes two recesses into which three sensors are positioned. *Id.* Similarly to Chang, the sensors of Ogawa are positioned below an area where the golf club passes, *i.e.*, the sensors face upwards from the golf mat. *Id.* at Col. 2, lines 47-63.

The disclosure of Yamazaki is even further divorced from the features described and claimed by the present invention. That is, Yamazaki generally relates to a way to locate a golf ball after it has been hit. Yamazaki at Abstract. The golf ball is embedded with a sound generator that generates sounds that can be detected by a hand-held detector. Yamazaki fails to teach or suggest an ultrasonic trigger, or any other type of trigger. The reason for this is

simple – Yamazaki is not concerned with determining the movement of an object. Instead, Yamazaki relates to a method of finding a golf ball after it has been struck and comes to rest.

As shown above, Applicants have amended independent claims 1, 12, and 24 to clarify that one aspect of the present invention includes an ultrasonic trigger that is positioned in front of a target area through which a golf club passes. *See, e.g.*, FIG. 4A. This feature of the present invention is not obvious, as described by the Written Description of the present invention. *See, e.g.*, Page 3, line 27 – Page 5, line 4.

For instance, when positioned in such a manner the present invention provides several advantages, such as reliably determining position and velocity of a golf club or golf ball based solely on the reflected waves without the need for additional equipment. Page 3, line 31 to Page 4, line 2. Additionally, this feature of the present invention allows a player to swing a golf club in a more open, realistic area. Page 3, line 27 – Page 5, line 4. The non-obvious nature of the present invention is further underscored by the Examiner's failure to cite even a single reference that discloses the configuration claimed by the present application.

In addition, independent claim 12 has been amended to clarify that, in one embodiment, the ultrasonic trigger emits periodic waves. Page 6, line 17 – Page 7, line 2; and FIG. 4A. Further, claim 12 has been amended to clarify that the time period between the pulses is greater than or equal to twice the distance from the ultrasonic trigger to a target area. *Id.* Applicant notes that this feature is also recited in dependent claim 11, which the Examiner contends is disclosed by McTeigue. This contention, however, is not supported by McTeigue for the following reasons.

McTeigue, as discussed in previous responses, has no relation to ultrasonic triggers, triggers in general, or anything tangentially related to triggers. Instead, McTeigue generally discusses the ability to send signals using electromagnetic waves. The disclosure of McTeigue generally, and in particular the portion cited by the Examiner, does not teach or suggest using a time period between pulses that is greater than or equal to twice the distance from the ultrasonic trigger to a target area. The Examiner is reminded that McTeigue, as an initial matter, does not disclose triggers, and thus could not disclose this feature. Even if, *arguendo*, McTeigue does disclose triggers, it is wholly unrelated to monitoring the movement of an object, and thus would not be concerned with the time period between pulses claimed by the present invention.

In sum, Applicant submits that the Examiner has failed to set forth a *prima facie* case of obviousness under § 103 based on Chang, McTeigue, Ogawa, Yamazaki, and Nesbit,

either alone or in combination. As such, Applicant submits that the Examiner's rejections have been overcome. Reconsideration and allowance of the pending claims is respectfully requested.

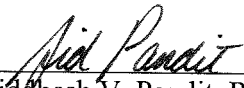
### **CONCLUSION**

All claims are believed to be in condition for allowance. Applicant invites the Examiner to contact the undersigned attorneys to discuss any issues pertaining to the patentability of the pending claims. No fees are believed to be due at this time. Should any other fees be required, however, please charge such fee to Hanify & King, P.C. Deposit Account No. 50-4545, Order No. 5222-017-US01.

Respectfully submitted,  
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By: \_\_\_\_\_



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